dtfa _An Economic Development Agency_

**THINK
IP MOBILE
WORLD**

435 North Main Street
La Verkin, UT 84745
(435)635-2400

Commission's Secretary, Marlene H. Dortch,
Office of the Secretary, Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

RE: GN Docket No. 09-157 and GN Docket No. 09-51

Dear Chairman and Commissioners:

Introduction

I am the consulting attorney for the Dixie Technology Funding Agency ("DTFA") an economic development agency located in La Verkin, Utah.

Mayor Karl Wilson of La Verkin has asked me to respond to your NOTICE OF INQUIRY released August 27, 2009, discussing the DTFA's vision and the first-of-its-kind Real-Time Community Mobile IP network as it pertains to your areas of inquiry in technology as well as business models and job growth perspectives.

In La Verkin, we have set up and can demonstrate a first of its kind anywhere -- fast roaming 300 Mbps bidirectional ("fiberless") fully IP Core wireless network with seamless convergence to GSM, CDMA, etc. Do NOT confuse this with the old "muni-wifi" systems that merely promised bridged "hot spots" through a city wide area. These new Ubiquitous networks will offer true "Community Mobile" capable systems with even better quality and bit rate capabilities right around the corner. These technology innovations are not just going to be available sometime in the near future; the technologies are available here right now and ready. Our job is just to figure out how we can best leverage these new technologies to bridge rural communications to the entire world.

This is extremely important for several reasons:
1. "Last-mile" deployment of "triple play" capable network without laying cable (fiber);
2. Mobile smart phones, Wi-fi capable, with onboard VOIP and/or SIP telephony
3. Mobile calls to anywhere in the world essentially for free *
4. Seamless convergence (over to your Sprint, T-Mobile, ATT, etc.) means the call is not dropped when passing out of the cloud;
5. millisecond hand-off between nodes ensures the call is not dropped, when traveling in a car for example, and making a call on the VOIP/SIP capable handset;

6. Noticeably "clearer" voice calling; and
7. Deployment at a fraction of the cost (no spectrum licensing fees)

Right now, in the USA, we have an opportunity to take a major step forward in the paradigm shift happening in telecommunications around the world, transitioning from the old "channeled" capacity models of cable and wired broadband internet into the "segmented" capacity wireless "cloud" computing models.

Today, the term "broadband" (or large capacity two-way data communications) must take on new meaning which includes more than just the "internet." The reason this has not happened before is because wireless technologies were not quite there yet in capacity, bandwidth, data rates, and consumer device availability. All that is changed now!

A. Understanding Wireless Innovation and Investment

While we would prefer not to be critical of the last 8 years or so in wireless technology innovation, we are going to be critical of some of those so-called "investment" strategies that have taken place in this country surrounding fiber to the home and municipal wifi projects – and the "hype" which has allowed some players to enter markets taking advantage of both small and large communities promising "better faster internet" with "bundle and save" services where consumer adoption has failed to materialize even close to the levels predicted.

The problem: "better faster" and "bundle and save" are only a different angle on the same thing – the internet. The DTFA proposes that merely offering hotspot or faster better internet "connection speed" to the home is never going to foster consumer adoption. While these communities may have had the best of intentions, the true key to consumer adoption will not be found in the internet, but it will be in the introduction of innovative systems and services with a paradigm shift from the internet into the ubiquitous mobile cloud computing that will drive growth. The internet will always remain an important and vital part of these new services, but the internet alone cannot be the driver; it must be the services themselves.

CASE STUDY EXAMPLE

AP May 16 2007: A transmitter with two antennas for wireless, high-speed Internet access strapped to a light pole on a residential street in Lompoc, Calif.

The city of Lompoc, CA planned a $3 million wireless Internet system promising a giant leap forward in economic development.

Having been hit hard just like the rest of the country by lost jobs and budget cutbacks, instead of economic development, nearly two years after its launch, Lompoc Net is limping along. The central California city of 42,000, surrounded by rolling hills, wineries and flower fields more than 17 miles from the nearest major highway, has only a few hundred subscribers. That's far fewer than the 4,000 needed to start repaying loans from the city's utility coffers, potentially leaving smaller reserves to guard against electric rate increases.

Analysis: Lompoc isn't alone. Across the United States, many cities are finding their Wi-Fi projects costing more and drawing less interest than expected, leading to worries that a number will fail, resulting in millions of dollars in wasted tax dollars or grants when there had been roads to build and crime to fight.

Hotspot technology offers only one thing: convenient internet connection within the specific coverage areas. Without innovative uses of Wireless Services, the consumer can not be expected to go out and build her own uses, like for example, virtual private networking to home media or mobile connectivity to businesses and anchor institutions that would truly drive consumer adoption.

## B. Innovative Uses of Wireless Services

Community Mobile projects offer something different then muni-wifi – and something more than just internet. Community Mobile offers an entirely new and free "local access" connection service for all. Those who live within the community mobile coverage and need the internet can do so through their own residential gateway (which can also be connected to the Community Mobile with a simple VPN or what we like to call a Home Digital Agent or "HDA"). Or, the local consumer may choose to pay for a Community Mobile system provided connection to the internet. Either way, the internet is certainly not the end-all to the community mobile connection services.

The key to this innovation has nothing to do with the wireless technology, but everything to do with the business architecture. They business key in this is Multiple Carrier Mesh Block Convergence or "MBC" for short. The MBC approach will allow more consumers more choices and more opportunities for innovative businesses to supply more services. Local access level services as opposed to only world-wide-web services will drive newer internet media and data "segmented" capacity. But the local businesses need help in finding these new pathways; they are not just going to do it all by themselves just because you build a network.[1]

This business building process is the job of the special purpose local government entity that follows our prescribed designs for this business architecture. This community mobile architecture in turn creates entirely new industries around the local access that did not exist before. What this segmented capacity means is that the internet need only be the agent (or authorization package carrier) whereas, the local wireless network becomes the actual segmented capacity carrier needed to deliver the large file and high bandwidth hogs for high definition digital media and data.

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[1] Local TV Digital Networks, for example:
http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=114293

Out of The Internet Cloud and Into the Pervasive Cloud
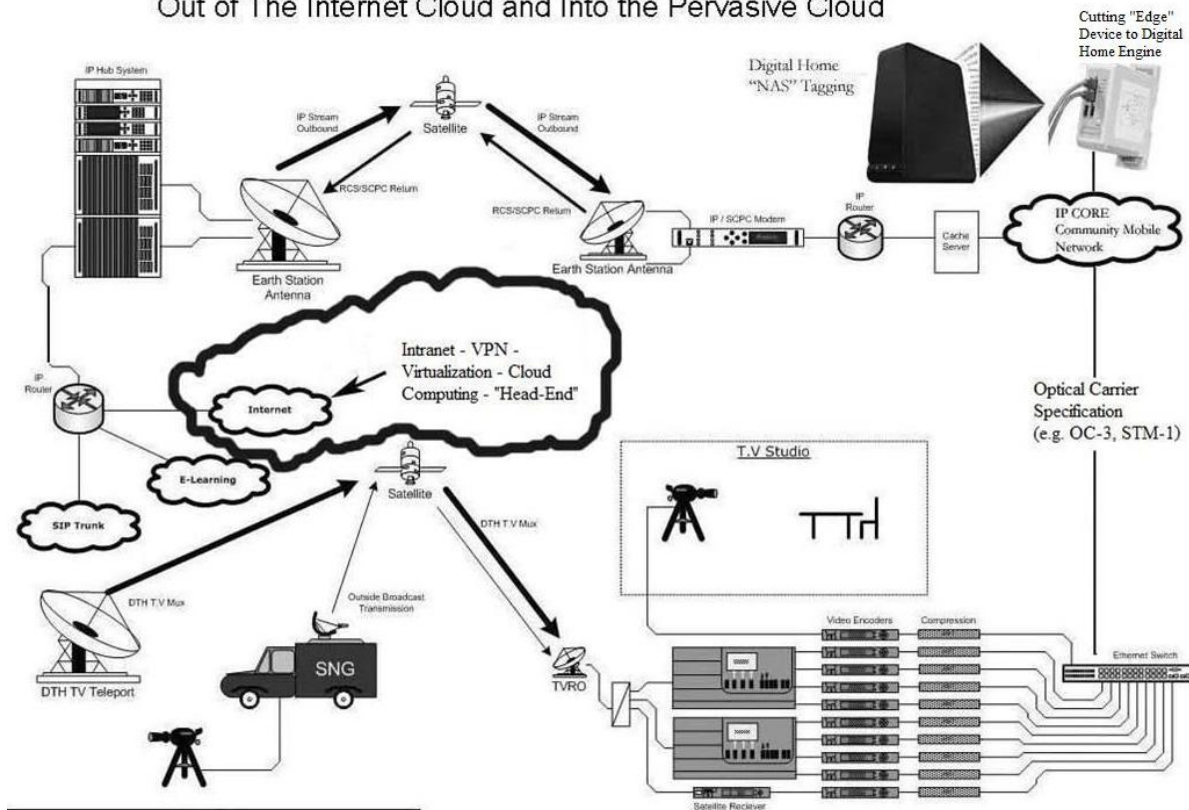
Imagine you are driving into a Community Mobile Cloud city or rural community for the first time. Also imagine you are on business, so you have your laptop with you and you turn it on to begin "scouting" out any local wireless hotspots you might use to connect to the internet to check your email and get online for your business needs.

Instead of finding a hotspot connection, you find a whole new "local access" network complete with high definition local access tv, community information, and a wide variety of premium service offerings from high speed internet, to cable tv channels, to e-commerce portals. If you like just the local access services, you continue to have them for free and unlimited. If you need connection, however, to the world-wide-web and if you are happy with a basic high-speed internet connection, you have the one-day free pass to try it out. If you are staying for more than a day, you might consider subscribing to a premium internet connection service package or maybe even a tv channel package. There are any number of other media or service packages you can choose from. This Community Mobile business architecture actually creates the sandbox in which many new industries can play and develop and grow – and at fiber like speeds without lacking the mobility, the consumer has a real quality of service experience without limitations.

Now, imagine that you are not a traveler, but that you live in this same community. You may already have a high speed internet connection in the home and then you likely already have a

wireless residential gateway with a Linksys, D-link, NetGear, or other wireless router so you can communicate from your laptop to your desktop, network area storage, or even a file server/media server within the home.

What the Community Mobile business architecture allows for is that both technologically sophisticated and unsophisticated consumers have each just as much to gain as the other from adopting onto the Community Mobile "cloud" computing. With an HDA gateway added to the home, that sophisticated and connected user can now simply take her residential gateway with her on the road. She need not have to buy any other services, like an internet connection for example, because through the Community Mobile network, she already has a connection to her home, which in turn already has a connection to the internet. Again, the multiple carrier mesh block controller (MBC) approach to ubiquitous interconnectivity allows for people to choose only the services they need – if and when they need them. But ubiquitous connectivity also allows for service providers to market even more services to those same consumers without limitations.

Internet access is already available at every hospital, school, and health care facility in practically every city in the entire United States. Any proposed program which offered only internet connections to those institutions, could not deliver any enhancements. A robust "Multiple Carrier Community Mobile" system, on the other hand, will enhance and ensure efficiency, portability, and security, with reduced costs of implementation, to create ubiquity in mobile and wearable technologies. These mobile and wearable technologies can then be used in health-care, online and remote classroom education, and in child safety.

Wearable location ID and health monitoring systems, for example, when integrated into a Community Mobile Cloud environment, will increase safety, access, functionality, data available to support early detection. With a fully IP core Wi-Fi enabled mobile phone, PDA, or bracelet technology, the location of children or patients can be quickly determined. If privacy with these monitoring systems is a concern, a fully IP core system with 256 bit encryption can ensure that only those who need the information can obtain the information.

Many patients can benefit from continuous ambulatory monitoring as a part of a diagnostic procedure, optimal maintenance of a chronic condition, or during supervised recovery from an acute event or surgical procedure. The important limitations overcome by Community Mobile that will enable wider acceptance of wearable health monitoring systems are accomplished through the mobile broadband environment created. With this change in paradigm for wireless networks we will expect to see even further advancements in MIMO "subnetting" technology, micro-fabrication, integration of physical sensors with embedded microcontrollers and microchip interfaces engendering a whole new generation of even more advanced wireless sensors suitable for many applications, such as stroke monitoring, surgery rehabilitation, myocardial infarction detection, or even prevention of traumatic brain injury.

Real-time remote classroom interfaces with broadband will allow a higher quality for distance learning (as well as distance teaching) i.e. multiple students with laptops in multiple locations can reach one instructor with two-way high definition audio and video, while conversely one instructor in a remote location could be piped into large K-12, STEM and NCLB class room

settings or auditoriums simultaneously. Community Colleges, Universities, Libraries, Hospitals, Health Clinics, and others can have improved skills, awareness, and education. Capabilities for city wide connected real-time video surveillance in public areas can ensure early detection and prevention crime. More solid state data storage, in more public places, will allow police officers, for example, to access to both stored and real-time video of a select location, and in the instance of a crime like child abduction, this in turn would stimulate crime prevention and crime deterrence.

These unlicensed "subnetting" networks are also green and energy efficient simply by the nature of low power emission standards. The FCC can encourage even greater innovation through providing a licensed bandwidth to facilitate quality of connection such as the FCC proposed AWS-3 ─totally free internet access. Through the use of "Digital Agents" like our proposed HDA in the home, a licensed frequency (always up) connection with limited bandwidth can be used to ensure continuous connection so that the end-user may experience occasional wait times when transporting very large file or large bandwidth transactions, but will never have to suffer some kind of interconnectivity problems due to interference or other bandwidth limiting forces that may occur. The beauty of melding some form of licensed spectrum into the HDA approach is that capacity can be shifted upon demand requirements in the unlicensed spectrum, but connectivity to the end-user can be maintained throughout without interruption or interference in the licensed spectrum.

C. Spectrum Use and Availability

Spectrum design strategy must consider the true source of the problem at hand, which is not that the technology still has to develop, but that this country has grown from an agricultural community, to an industrial based society, eventually to a service based economy. While we certainly do not advocate the FCC base its entire strategy on this notion, we would recommend this as a major communications theme for a new world resource-based communications strategy that replaces the need for the scarcity oriented communications business structure we have now. While this vision is certainly much farther off than some have predicted, it none-the-less depicts a world that is rich in natural resources and energy and that — with modern technology and judicious efficiency — the communication needs of the global population can be met with abundance, while at the same time removing the current limitations of what is deemed possible due to notions of economic viability.

Jacque Fresco, a self-educated industrial designer, once said, "At the beginning of World War II the U.S. had a mere 600 or so first-class fighting aircraft. We rapidly overcame this short supply by turning out more than 90,000 planes a year. The question at the start of World War II was: Do we have enough funds to produce the required implements of war? The answer was No, we did not have enough money, nor did we have enough gold; but we did have more than enough resources. It was the available resources that enabled the US to achieve the high production and efficiency required to win the war."

To employ this thinking into an IP-Core Community Mobile environment we had to look at the available wireless frequencies: in addition to the traditional 2.4Ghz wireless structure, in 1997,

the FCC put into place its Unlicensed National Information Infrastructure (U-NII) radio band as part of the radio frequency spectrum used by IEEE-802.11a devices and by many wireless ISPs. It operates over three ranges: U-NII Low (U-NII-1): 5.15-5.25 GHz. Regulations require use of an integrated antenna. Power limited to 50mW; U-NII Mid (U-NII-2): 5.25-5.35 GHz. Regulations allow for a user-installable antenna, subject to Dynamic Frequency Selection (DFS, or radar avoidance). Power limited to 250mW; U-NII Worldwide: 5.47-5.725 GHz. Both outdoor and indoor use, subject to Dynamic Frequency Selection (DFS, or radar avoidance). Power limited to 250mW. This U-NII spectrum was added by the FCC in 2003 to "align the frequency bands used by U-NII devices in the United States with bands in other parts of the world". U-NII Upper (U-NII-3): 5.725 to 5.825 GHz. Sometimes referred to as U-NII / ISM due to overlap with the ISM band, regulations allow for a user-installable antenna. Power limited to 1W, which in the new MIMO configurations creates the Gbit backhaul and long distance point to point capabilities.

Consider the times you may have entered into a community and began looking for potential wifi connections for your laptop and have seen as many as 30 SSIDs in one location, ranging from home residential gateways to hotel-motel guest systems. Now consider a commercial cloud (or canopy, e.g – TM Motorola). Thanks to the U-NII and now the new OFDM technologies, the amount of bandwidth in these spectrums is abundant. The FCC should consider opening up even more channels within these bandwidths to handle and control even more traffic.

These Community Mobile last mile networks can tie into both fiber and satellite tier-1. The IP-Core principled design opens up and creates a newer better organized and more useful paradigm for the spectrum. All business wireless and home residential gateways will be able to continue to operate just as they have with plenty of room for all. Again, the FCC need not create more unlicensed spectrum, but merely announce and advocate for better controls and uses of the spectrum. As soon as consumers realize that their home wireless gateways are not the means to the end in the newly created secure ubiquitous environment, there will be a greater willingness to share channel space with the larger community and "test bed" programs in the 70-80-90 GHz ranges can begin to move forward with the "auction chips" falling where they may. It is the unlicensed spectrum that affects the end-user because that is the frequency of receiving and transmitting end-user device.

D. Networks, Devices, and Applications

Community Mobile architecture is connectivity the way it was meant to be – out of the internet cloud and into the Ubiquitous pervasive cloud. Consider some of these comments from a 2005 survey entitled "Municipal Wi-fi, Hype or ―Happening" taken at another one of those information management conferences with a lot of CIOs in attendance:
Susan Cramm, Founder CIO Value Dance, said, ―Municipal Wi-fi, I'd like it to happen." Vince Kellen, V.P. Information Services, DePaul University: "Municipal Wi-Fi, 5 years from now, not now." Umesh Manathkar, CIO Silicon Laboratories, said, "Municipal Wi-fi, I think, there is a little bit of growth right now; its in a kind of small burgeoning stage. So, it could be hype at this stage, but it will mature over time and it will get real over time for sure." Jim Cates VP & CIO, Altera Corporation, gave the comment, "it has a lot of potential for the public at large. I think inside corporations, I would restrict it for security, but for society in general, I think it is a good

technology." John Von Stein, Executive VP & CIO, The Options Clearing Corporation: "Municipal Wi-Fi is happening." David Wagner, CIO, ON Semiconductor, relayed to the interviewers "municipal wi-fi – happening. I have run into it a lot in my travels."

Community Mobile is not a network, device or application, but at its heart, Community Mobile is "IP-Core technology," which unknown by many – is really a business strategy type of architecture – and does not refer simply to ―Internet Protocol. In network design, an intellectual property core, IP block, IP core, or logic core is a reusable unit of logic, cell, or chip layout design.

IP-core then, very precisely parallels what Multiple Carrier Community Mobile Cloud brings to rural broadband communications business logic. IP-core fulfils necessary business architecture for local access communications through its cloud design, which basically means virtual private networking (VPN) and cloud application services are the natural consequence of an IP-core Mesh Block MAC level control. A home or business subscriber can have all of her media and back-up files on a desktop PC, home server, or home network area storage (NAS) device, delivered and viewable on a local area network in the home as well within the Cloud. Add 300+ Mbps bandwidth on the local subnet and the past problems of bandwidth and bottlenecks of the internet are eliminated.

Ubiquitous broadband communications are not the same as internet. No matter how fast your internet connection speed may be, if you are downloading from a website that does not have the same speed or scaleability, there is no way to speed up the data transmission other than burning a DVD, hopping into the station wagon, and delivering it yourself. In Community Mobile the term "wireless" is changed to "fiberless" because it is a misnomer that fiber necessarily has the largest bandwidth. On the contrary, the attractiveness of fiber is in the network architecture where large bandwidths can be carried over larger distances. When it comes to bandwidth alone, a cat-6 cable with Gibabit Ethernet ports, switches, and routers can be every bit as fast and handle bit rates as just as fast and well as fiber; they just can't take it the same distances.

Today, Gbit "fiberless" technology can change everything with end-to-end data packet delivered with or without the internet. The IP-core principles do not treat the subscriber as just one logic unit, or just one census block. It is the service to the person that is the business opportunity, not the interconnection. IP-Core services have no geographical boundaries.

It is the Home Digital Agent (HDA or "Home Box") device that really opens up this ubiquity. The key is that this Home Box is not like any other Set Top Box ("STB") of which there are many on the market (although it performs a few of the same functions). The Home Box HDA is the equivalent of a VPN appliance, yet it also registers a MAC address level of control for playback: The device is registered to a user who is in turn registered to a media collection and in turn registered to a number of devices. It is pretty easy to see how this satisfies playability issues for the user: she just registers a number of devices with the Home Box. Although it works on similar principles, this is called "serial copy registry" not "Digital Rights Management" because the internet is only used to deliver the authorization. The media itself flows only through "segmented capacity" gates on the local access side with caching and other optimizations.
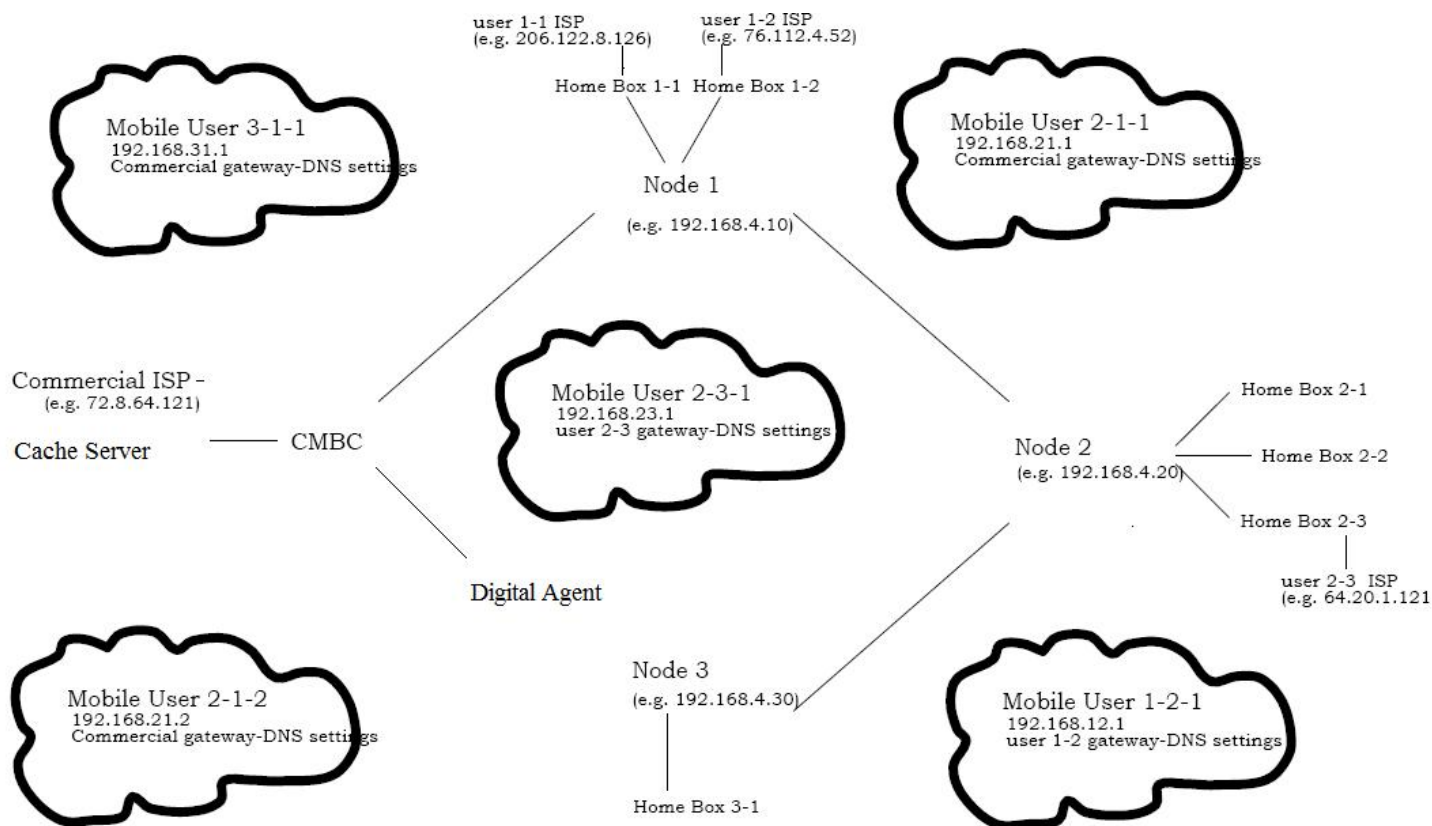
Community Mobile principles are not focused on a particular technology. Technology changes; it is a particular architecture. Again, the beauty of the Community Mobile architecture as opposed to the Muni-WiFi hotspot architecture is that it places minimal burden on manufacturers to create new devices. Many of the Muni-Wifi networks could already be prepared to convert fairly quickly. Some may need updated radios in the mesh nodes to bring them up to speed with the new "MIMO" technologies, but at their base, they are already prepared for the new RF equipment. Community Mobile architecture will make the building and installing these networks and time to market a plus rather than a liability. None of the existing equipment authorization processes at the FCC would need to be modified or relaxed in order to simplify the process.

Applications and services will lead innovation and that way the proper technologies will follow. One of the key principals to quality functional deployment engineering ("QFD") is that the consumer demands must lead the engineering design instead of the other way around.

CASE STUDY EXAMPLE

DIGITAL MEDIA COLLECTION
SERIAL COPY REGISTRY

DISTRIBUTORS   SUBSTITUTES

PROPRIETARY   PUBLIC DOMAIN

BARRIERS TO ENTRY   SUPPLIERS

DIGITAL RIGHTS MANAGEMENT

(NEW PLAYER MARKET FORCES)

Vibme LLC is a small innovative start-up in Utah. Vibme is just one example of innovative "spin out" industries that are leveraging what we can now call the new "segmented capacities" in two-way digital communications.

Vibme's launch product, called the SCART™ Card, stands for "Secure Consumer Advantaged Retail" Tagging for digital download-to-own. As the name suggests, Retail Tagging is a patented new means whereby specific download-to-own digital goods (also called electronic sell-through "EST") like a movie or music album for example, are sold at retail rather than online with credit cards or other account driven on-line purchases. With Retail Tagging, items are specifically sold at retail with authorized redemption on the network. Unlike "prepaid" stored-value cards, where points or dollars were loaded onto a prepaid card and then used online – in Retail Tagging, specific items are transferred for ownership, thereby eliminating the need for loading any so-called "stored value."

MAC-address-level controlled media can be delivered directly to the Home Digital "Player" before the consumer gets home without the Internet to slow things down. If done correctly, the SCART card will not require banking regulation as it does not represent an amount of money and therefore is a much better vehicle – particularly when selling or gifting to minors who by action of law are not allowed to enter into contracts with on-line vendors or otherwise. At retail, age can be verified to ensure safety for adult rated movies or games.

Analysis: In the previous decade, mobile wireless applications were largely limited to paging, voice service, and text messaging. Now, thanks in part to significant advances in both network infrastructure and mobile device capabilities, the market for mobile wireless applications has dramatically expanded to include, for example, web browsing, location services, music services, instant chat, streaming video and radio services, downloadable ringtones, and many other uses.

Vīb•me
SCART™

Vibme's SCART products are a great example of an applications service that can operate much like (or even within) the current "Red Box" systems, but with a much larger and more efficient catalog. If the FCC can begin to understand these types of "spin-out" industries, they will be better able to explain and influence related agencies like the RUS and BTOP who are concurrently considering the DTFA's grant application. The FCC can vocally encouraged just these very types of innovations that will spurn further growth opportunities and job creation in the telecommunications sectors. Vibme's SCART is an example of an innovative product that will thrive and create jobs directly related to the local access network.
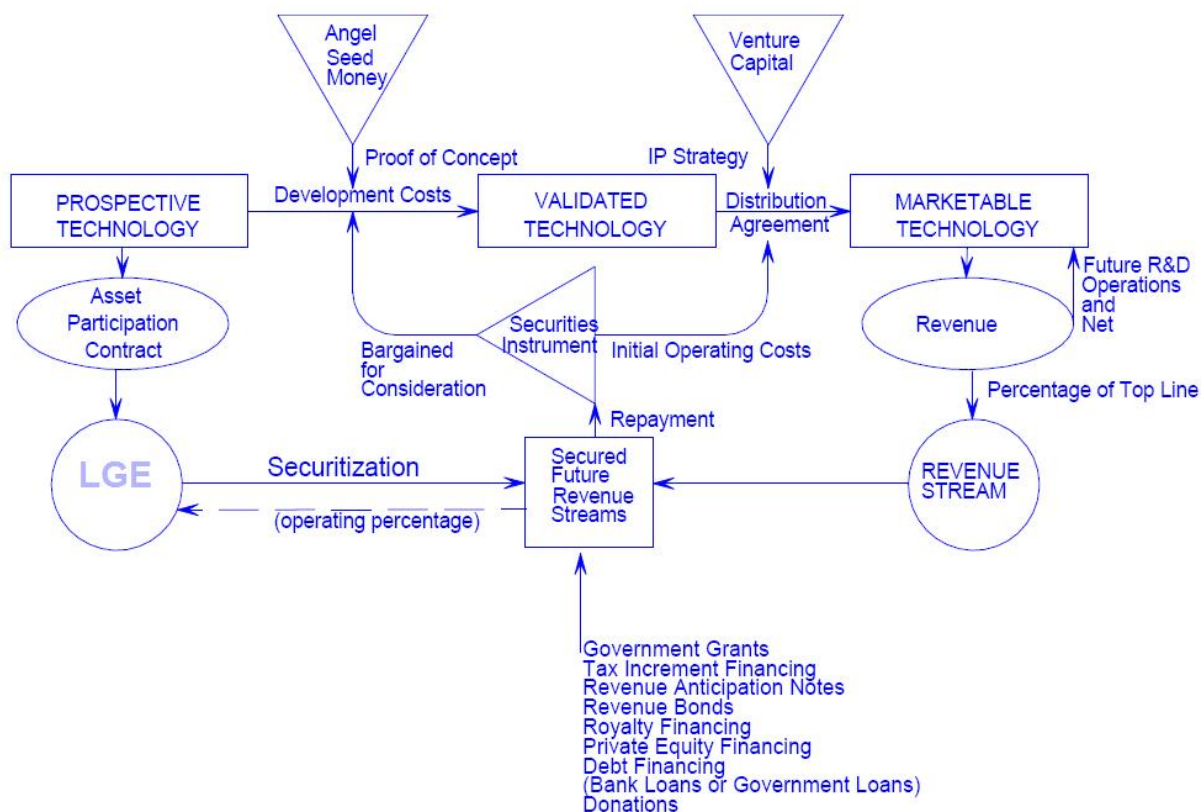
E. Business Models and Practices

It should be obviously clear at this point that the DTFA's recommendations to the FCC are that the Business Models and Practices are far more important to successful development of wireless strategies than any other particular technology. This concept now stumbles upon the realization that the FCC is going to have to work this from an "interagency" perspective and take into consideration that the Department of Commerce is the over-arching authority that should be encouraged to show leadership and provide direction in these matters.

A local Director of Contracts (DOC) Organizational Scheme is also the best means to ensure that interests of fair local competition along with uniformity of principles and guidelines are properly carried out. Because more competing resources can be made available to wireless infrastructure projects through outsourcing, a DOC organizational scheme is the best structure when it comes to fast-paced technology. The old adage of bigger is better simply does not apply. The Dixie Technology Funding Agency DOC has a track record which has demonstrated great accomplishment. The key to the success and sustainability in a complex project has been the DOC small organizational operating unit.

Though small, a DOC allows for the greatest flexibility in keeping up with all the available technology resources. We know that technology is constantly changing at an alarming pace. The likelihood of a specific technology becoming outdated even before its implementation is becoming common place. Regulatory implementations usually follow. A DOC is the most agile form of organization to be able to jump —on and not necessarily —ahead of the curve. The FCC controls only the airwaves, yet the FCC, working through a local nurturing organization can obtain involvement in the business aspects during the entire development process without overstepping its boundaries to help create local wireless digital-tv stations to operate either along side the local digital signal based tv stations. In communities that have local tv, or on its own in communities that may not be large enough to bring in the signal based stations, with greater interaction and more business opportunities, local wireless digital-tv stations can thrive.

Given this exponential pace of change in technology, only the DTFA is properly formed and agile enough to legally leverage the Recovery Act or other federal or state developmental programs to bring about the evolving Community Mobile Cloud. In addition to grant funds, an exciting and proven securities instrument called the "asset participation contract" can leverage municipal securities including tax increment financing, revenue anticipation notes, industrial revenue bonding, royalty financing, private equity financing, loans, and public donations to provide nurturing and private funding for sustainable growth and technology upgrades.

Local Government Entity ("LGE") Technology Nurturing

Initial capital injections like those from federal grants and other resources can serve as the springboard. With subscribers, all future revenue securities instruments with inter-city and inter-State agreements can follow with oversight resting at the community level, but policy making at the federal level.

What the DTFA presents here should be of extreme importance to the FCC because if you are not analyzing government collaboration in telecommunications with private companies with the same vigor as the potential plaintiffs in an antitrust lawsuit, the affect of legal battles could nullify any progress that might be had in developing technologies. Legal battles will destroy wireless projects and no amount of spectrum control can possibly turn around years of litigation over telecommunications and government backed monopolies.

Government Collaboration in Telecommunications has been perhaps the most frequently litigated topic since the Bell System Divestiture of 1982. The Dixie Technology Funding Agency is and example of a Local Government Agency that should be duplicated in other States and cities across the country. In Utah, the entity was formed under Utah (U.C.A. 1953 § 17C-3-1 et seq.) and since its inception has been dedicated to understanding and solving this very legal issue of government collaboration in telecommunications infrastructure. A 600 page thesis on this topic would only begin to scratch the surface of the history and legal precedence in this determination, but under this limited response to your NOI, we simply introduce the DTFA capabilities and persuade the reviewers to truly consider whether the FCC and FTC under their umbrella Department of Commerce organization has thoroughly thought through these legal matters.

Walking headlong into litigation is something that the FCC and FTC must avoid at all costs. Ironically, Federal preemption is a main topic of the legal debate since 1982; any public/private strategic alliances in telecommunications would by definition be bound by any constitutionally correct State telecommunications laws which have been consistently free from Federal Preemption. e.g. *Nixon v. Missouri Municipal League*, 541 U.S.125 (2004).

Under most State law today, local governments can provide public internet and are free to contract with private industries for technology and support; but all of those third party providers must be subject to State money management for competitive bidding, relieving the Department of Commerce of this burden. The DTFA would eliminate possible improprieties within the FCC rulemaking and leave the oversight to the States. And, the DTFA has constructed its own municipal wireless cloud already; currently installed in the City of LaVerkin, Utah, which in an open space laboratory setting utilizes all the technologies spoken of in this response to the NOI.

This network may now serve as an excellent testing playground where even the FCC proposed AWS-3 —totally free internet access may one day become reality. With the exponential pace of change in technology, only the DTFA is properly formed and agile enough to legally leverage the Recovery Act for other federal or state developmental programs to bring about the evolving Community Mobile Cloud.
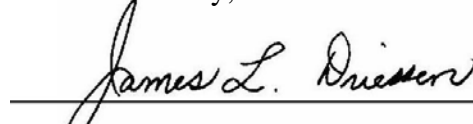
F. Supporting Innovation and Experimentation

Finally, the DTFA Director of Contracts structure along with its local government entity (LGE) technology nurturing platform can leverage even more advancements in fostering innovation and investment in the Wireless Communications Market, developing a National Broadband Plan for our future. Because the DTFA takes a very strong technology neutral position with an absolute "no franchise" approach to any services running on the network, it fosters the greatest amount of open competition for sustained development of new technologies. With this in mind, the DTFA has not been sitting back and waiting for the innovation to come to them. The DTFA has built a first of its kind Ready Community Mobile: evolving real-time subnet IP Cloud; fast roaming 802.11a/b/g/n MIMO(multi-in-multi-out); millisecond handoff; Wi-fi capable, 300+ Mbps bidirectional (fiberless); IP Core VOIP/SIP support; seamless convergence to GSM/CDMA; Gbit backhaul; bridging rural communications to the world with Last-mile triple play; clearer voice calling; and deployment at a fraction of the cost. This all comes as a result of its unique technology nurturing business structure.

The DTFA would ask the FCC not to just keep the information gained in these and other responses to the NOI only to itself, but to proactively seek out those other agencies under the Department of Commerce and US Department of Agriculture including the Rural Utility Service, National Telecommunications and Information Administration, and Federal Trade Commission to develop coherence in the goals and programs described herein.

"We're all in this together; once we know that we are." *David Lawrence, High School Musical Soundtrack, Walt Disney Records (2006).*

Thank you for this opportunity to provide our input. If there is any substantive defect in our submission or in following proper submission procedures, please contact us using the below information and we would like the opportunity to correct it.

Sincerely,

James L. Driessen, JD/MBA BSME
Consulting Attorney
Dixie Technology Funding Agency
435 North Main Street
LaVerkin, UT 84745
Ph: (801)360-8044